ABSTRACT

PHARMACEUTICAL COMPOSITIONS FOR ORAL AND TOPICAL ADMINISTRATION

A method of increasing viscosity of a pharmaceutical formulation for oral or topical administration comprises the steps of combining:

a) an effective amount of one or more hydrophobic active ingredients;

b) 5 to 50% of one or more compounds selected from polyglycerol esters of fatty acids of formula (1)

$$CH_2OR\text{-}CHOR\text{-}CH_2O\text{-}[CH_2CHOR\text{-}CH_2O\text{-}]_NCH_2\text{-}CHOR\text{-}CH_2OR \quad (1)$$

wherein n is an integer from 4 to 13 and R is H or CO.R' wherein R' is $C_{8\text{-}22}$ saturated, unsaturated or hydroxylated alkyl and wherein at least one group R is not hydrogen;

c) 5 to 50% of one or more compounds selected from polyglycerol esters of fatty acids and/or unsaturated fatty acids of formula (2).

$$CH_2OR\text{-}CHOR\text{-}CH_2O\text{-}[CH_2CHOR\text{-}CH_2O]_NCH_2\text{-}CHOR\text{-}CH_2OR \quad (2)$$

wherein n is an integer from 0 - 10 and R = H or CO.R" wherein R" is $C_{8\text{-}22}$ saturated, unsaturated or hydroxylated alkyl, and wherein while at least one group R is not hydrogen;

d) 5 to 50% of one or more compounds selected from triglyceride macrogol glycerol esters, partial glycerides or fatty acids or macrogol esters of fatty acids in which the average quantity of reacted ethylene oxide in the synthesis of these substances ranges between 50 to 150 mols and concurrently the ratio between components b) and d) is from 0.1 : 1 to 10 : 1;

wherein the above percentages are selected to total 100%;

and wherein upon dilution with water 1:1 by volume the viscosity of the formulation increases by at least 5 times in comparison to the undiluted composition.